Grin2b

This Grin2b CRISPR/Cas9 generated mutant of the Grin2b gene possessesloxP sites flanking 599 nucleotides (exon 4 of Ensembl transcript 201 and exon 5 of transcript 202). This strain may be useful for generating conditional mutations in applications related to neurodevelopment.

Donating Investigator

Cathleen Lutz, The Jackson Laboratory

### GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tr>
<td>Grin2b&lt;sup&gt;em5Lutzy&lt;/sup&gt;</td>
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**Allele Type**: Endonuclease-mediated (Conditional ready (e.g. floxed), No functional change)

**Gene Symbol**: Grin2b

**Gene Name**: glutamate receptor, ionotropic, NMDA2B (epsilon 2)

### RESEARCH APPLICATIONS

**Neurobiology Research**

**Developmental Biology Research**

**PLACE ORDER**

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.
CRISPR/cas9 endonuclease mediated genome editing of the *Grin2b*, glutamate receptor, ionotropic, NMDA2B (epsilon 2), gene was used to introduce *loxP* sites flanking 599 nucleotides (exon 4 of Ensembl transcript 201 and exon 5 of transcript 202). The targeted *Grin2b* gene encodes part of the excitatory neurotransmitter N-methyl-D-aspartate (NMDA) receptor. Mutations in this gene have been associated with Mental Retardation, Autosomal Dominant 6, with or without Seizures and Early Infantile Epileptic Encephalopathy 27. Mice that are homozygous for this allele are viable and fertile. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have *loxP* site flanked region deleted in the cre-expressing tissues. As the mice are characterized, we will modify the strain description and add phenotype data.

This model was generated in collaboration with the Simons Foundation Autism Research Initiative (SFARI).
Genotyping Protocols
Probe: Edil3-Probe
Probe: Grin2b (5'Loxp)
Genotyping resources and troubleshooting

Breeding Considerations

When maintaining a live colony, these mice can be bred as homozygotes.

Additional Breeding and Husbandry Support
Mating System
Homzygote x Homzygote

Citation
When using the Grin2b flox mouse strain in a publication, please cite the originating article(s) and include JAX stock #032664 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability

Cryo Recovery

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

CRYORECOVERY - DOMESTIC PRICING
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Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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Related Strains

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